

# Stormwater Division

## MEMORANDUM

**DATE:** March 5, 2010  
**TO:** Michael J. Gillis, Virginia Correctional Enterprises Document Management Services  
**FROM:** Jo Anna Ripley, Stormwater  
**PO:** 270712  
**RE:** Files Approved for Scanning

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**General File ID or BMP ID:** PC002

**PIN:** 3910100014

**Subdivision, Tract, Business or Owner**

Tewning Business Center Condominium Owners  
Association

**Name (if known):**

**Property Description:**

Common Area

**Site Address:**

140 Tewning Road

**(For internal use only)**

**Box** 5

**Drawer:** 3

**Agreements: (in file as of scan date)**

N

**Book or Doc#:**

**Page:**

Comments

Infiltration trench

PRINTED ON

Friday, March 05, 2010

9:21:19 AM

WATERSHED

PC

BMP ID NO

002

PLAN NO

TAX PARCEL

(39-1)(1-14)

PIN NO

39101000014

CONSTRUCTION DATE

5/1/1994

PROJECT NAME

Tewning Business Center

FACILITY LOCATION

140 Tewning Road

CITY-STATE

Williamsburg, VA

CURRENT OWNER

Tewning Business Center Owners Association

OWNER ADDRESS

1 Waterford Court

OWNER ADDRESS 2

CITY-STATE-ZIP CODE

Williamsburg, VA 23188

OWNER PHONE

MAINT AGREEMENT

Yes

EMERG ACTION PLAN

No

Get Last BMP No

Return to Menu

MAINTENANCE PLAN

No

CTRL STRUC DESC

SITE AREA acre

1

CTRL STRUC SIZE inches

LAND USE

COMMERCIAL

OTLT BARRL DESC

CPEP

old BMP TYP

Infiltration

OTLT BARRL SIZE inch

12

JCC BMP CODE

C3

Infiltration Basin .5

POINT VALUE

10

EMERG SPILLWAY

No

SVC DRAIN AREA acres

0.6

DESIGN HW ELEV

2-YR OUTFLOW cfs

2.07

10-YR OUTFLOW cfs

2.70

REC DRAWING

No

SERVICE AREA DESCRI

None

CONSTR CERTIF

No

IMPERV AREA acres

Chisel Run

LAST INSP DATE

9/12/2000

Inspected by:

RECV STREAM

INTERNAL RATING

3

EXT DET-WQ-CTRL

No

0.1

MISC/COMMENTS

WTR QUAL VOL acre-ft

No

CHAN PROT CTRL

No

CHAN PROT VOL acre-ft

0

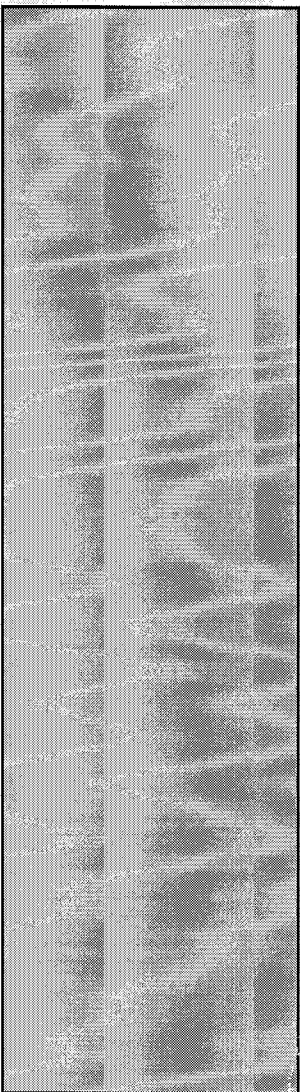
SWFLOOD CONTROL

No

GEOTECH REPORT

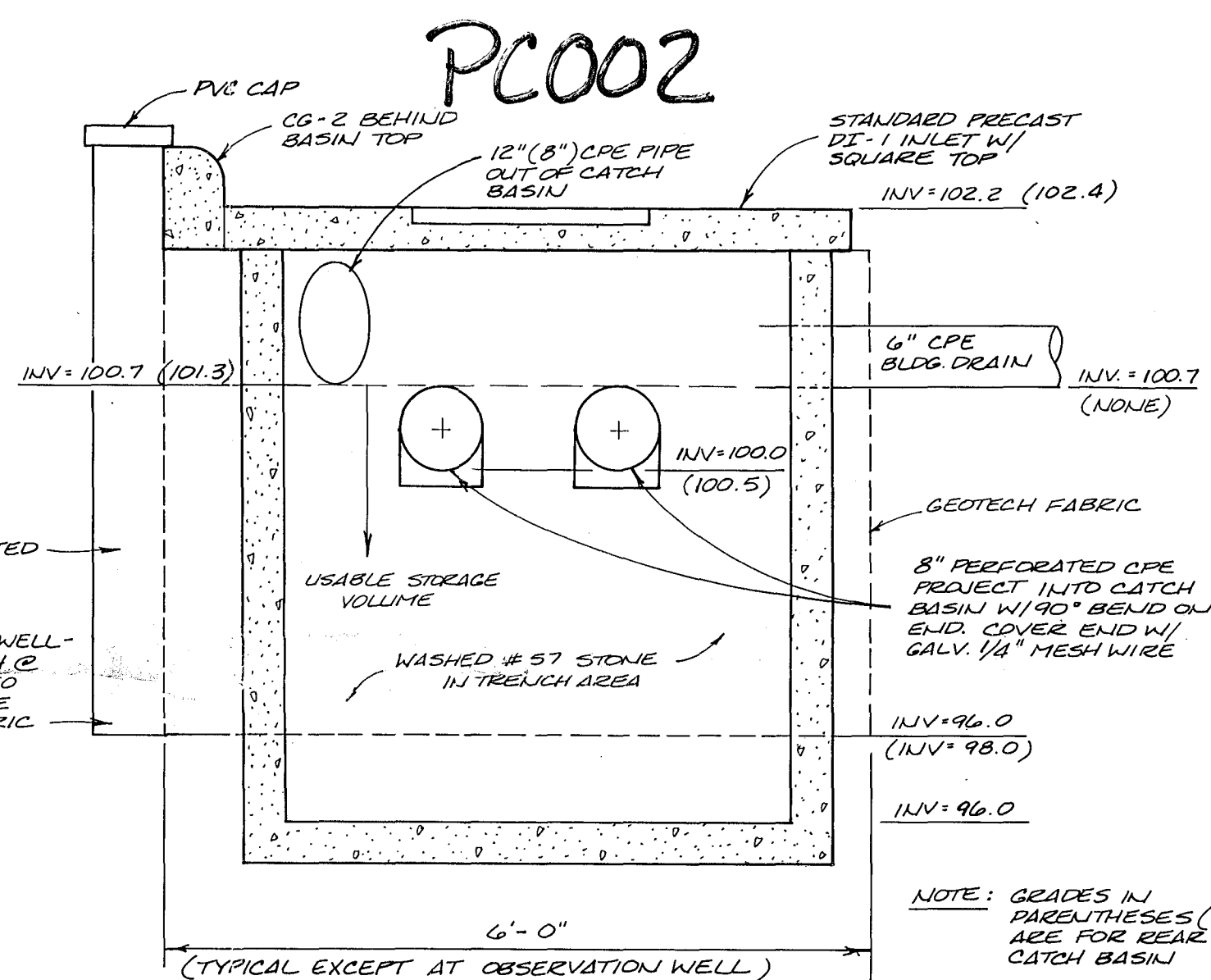
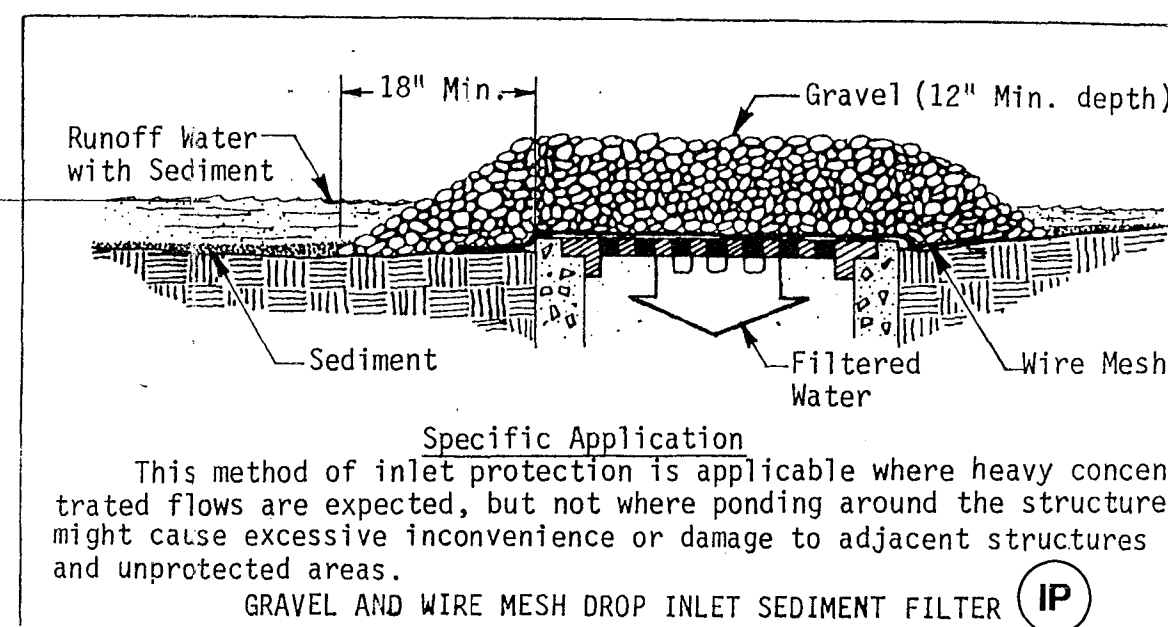
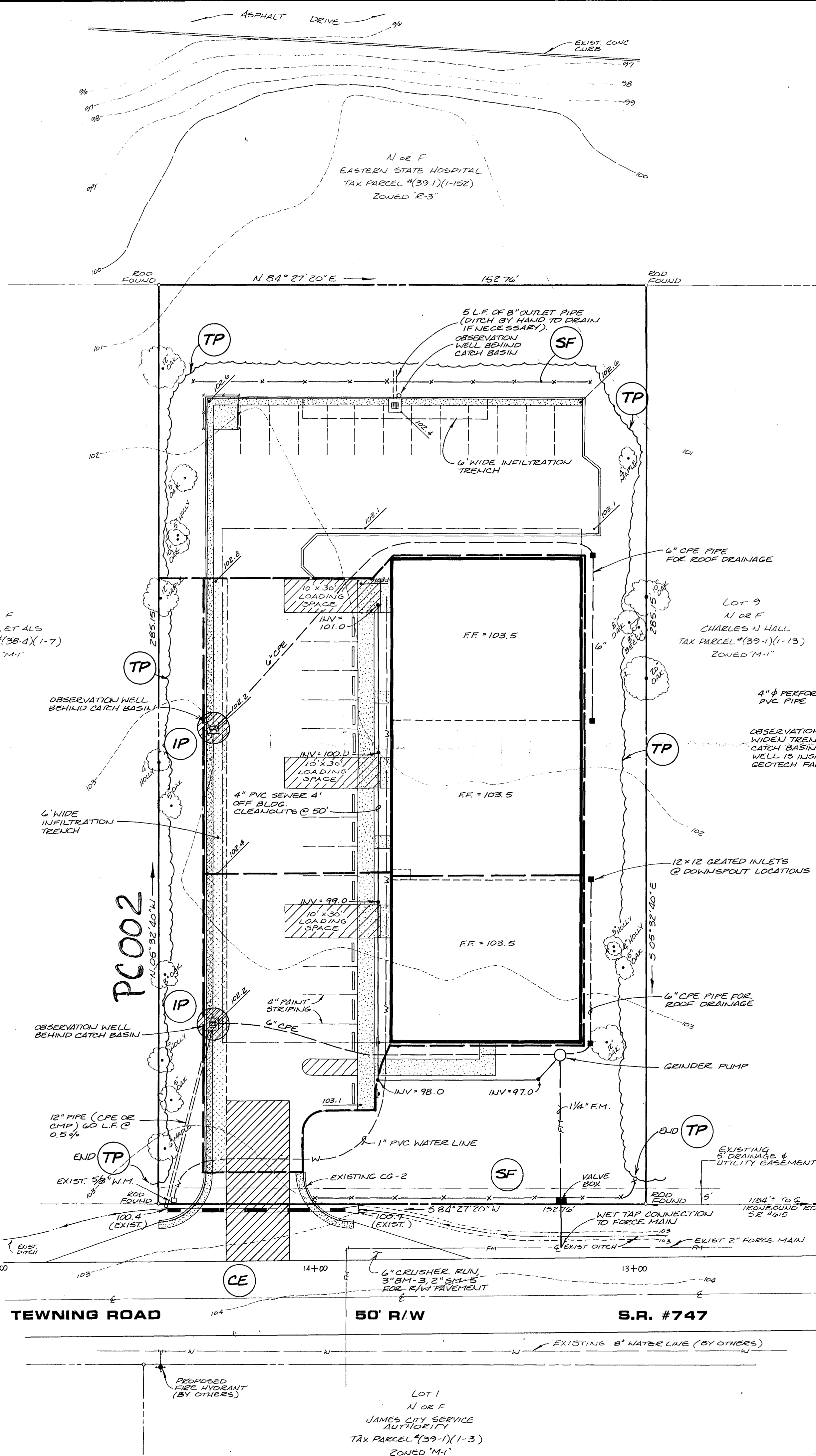
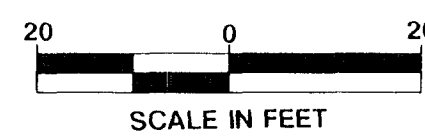
No

Additional Comments:



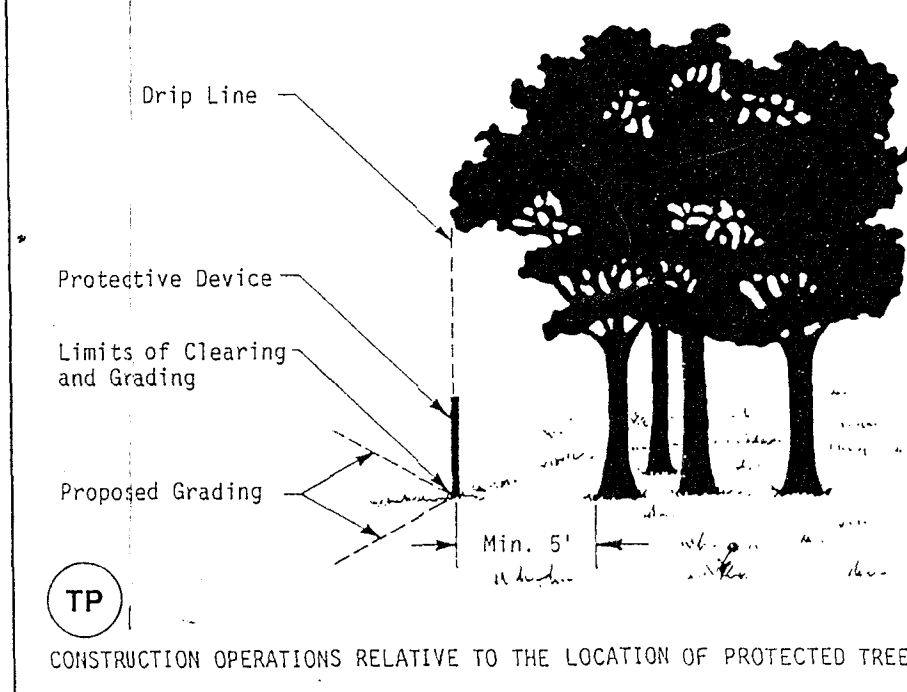
The purpose of the erosion control measures shown on these plans shall be to preclude the transport of all waterborne sediments resulting from construction activities from entering onto adjacent properties or State waters. If field inspection reveals the inadequacy of the plan to confine sediment to the project site, appropriate modifications will be made to correct any plan deficiencies.

- 
- Diagram illustrating the construction of a Gravel Construction Entrance:
- The entrance is a rectangular area filled with coarse aggregate.
  - The width of the entrance is labeled as **50' Minimum**.
  - The depth of the aggregate layer is labeled as **6" Minimum**.
  - The material is labeled as **VDH&T F1 or 3 Coarse Aggregate**.
  - The entrance is located adjacent to a **Hard Surface Public Road**.
  - A circular logo with the letters **CE** is shown below the diagram.
  - The text **GRAVEL CONSTRUCTION ENTRANCE** is written below the logo.



INFILTRATION TRENCH  
N.T.S.

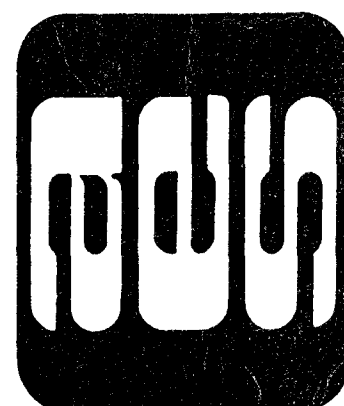
PROTECTIVE DEVICE MAY BE SILT FENCING, SNOW FENCING,  
ORANGE PLASTIC PROTECTIVE FENCING OR OTHER TYPES  
SUITABLE TO JAMES CITY COUNTY CODE COMPLIANCE.



	SIZE	VOLUME	USABLE VOL	REQ VOL CF
PH 1 BLDG & LOT	6 x 3.7 x 93 =	1953 CF	824 CF	7420/12 = 618
PH 2 BLDG & LOT	6 x 3.7 x 93 =	1953 CF	824 CF	7418/12 = 618
PH 13 BLDG				
PHASE 3 LOT	6 X 3.3 X 58 =	1148 CF	459 CF	5485/12 = 457



**AES**, a professional corporation  
5248 Olde Towne Road, Suite 1  
Williamsburg, Virginia 23185  
(804) 253-0040  
**Engineering, Planning, Surveying**



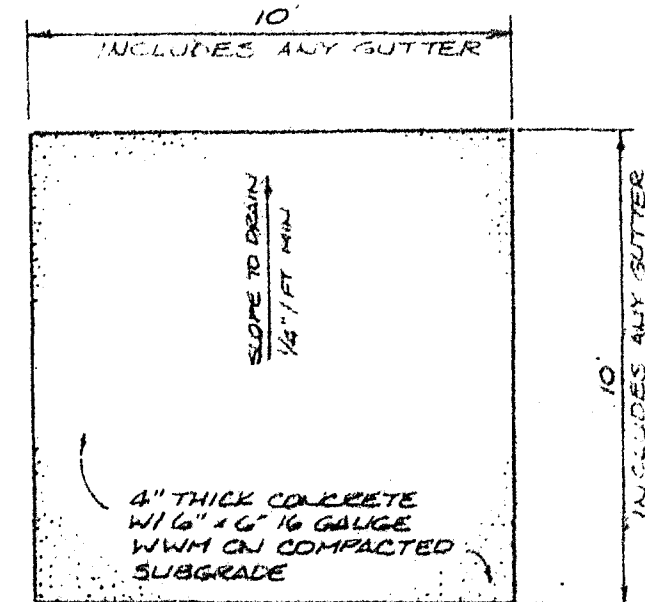
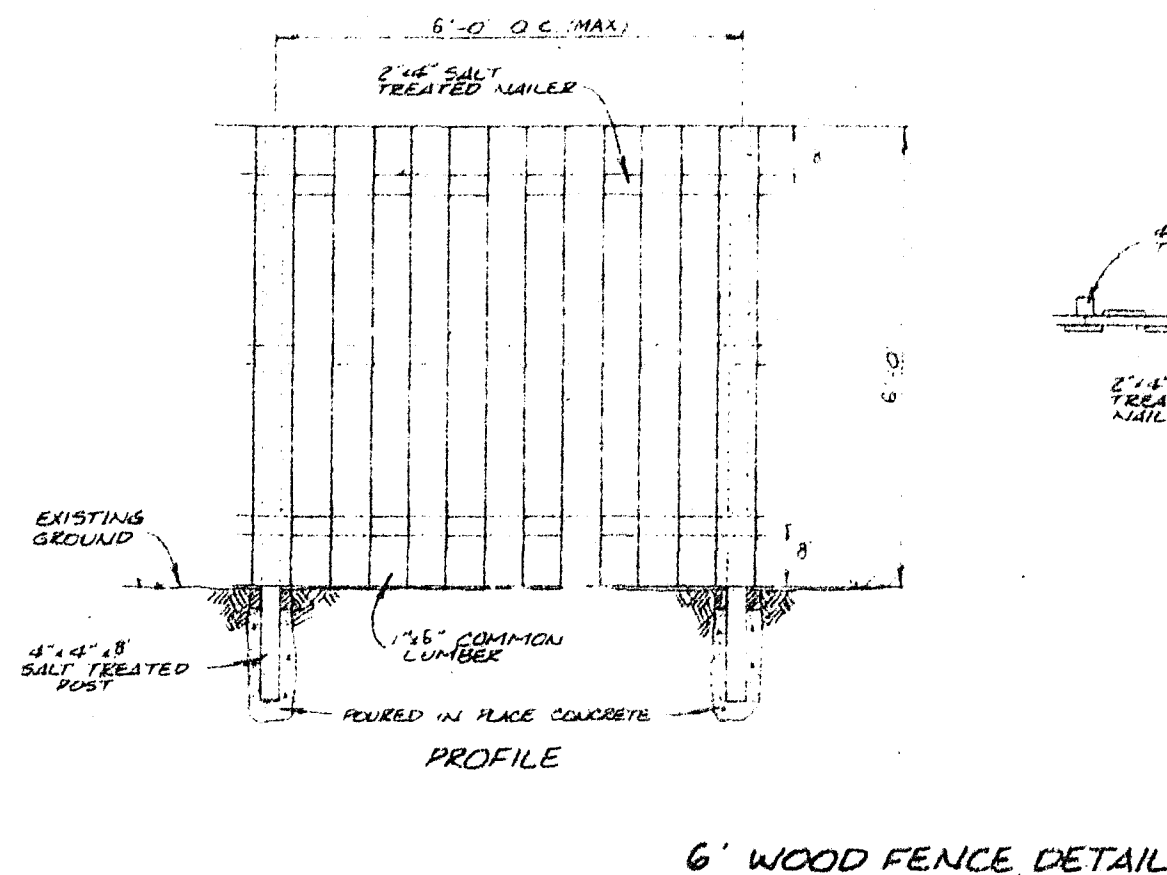
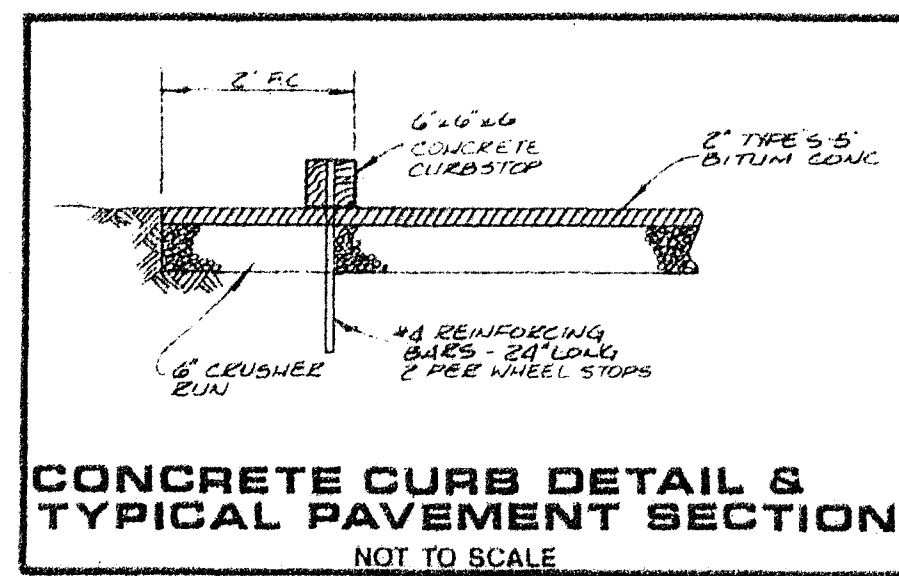
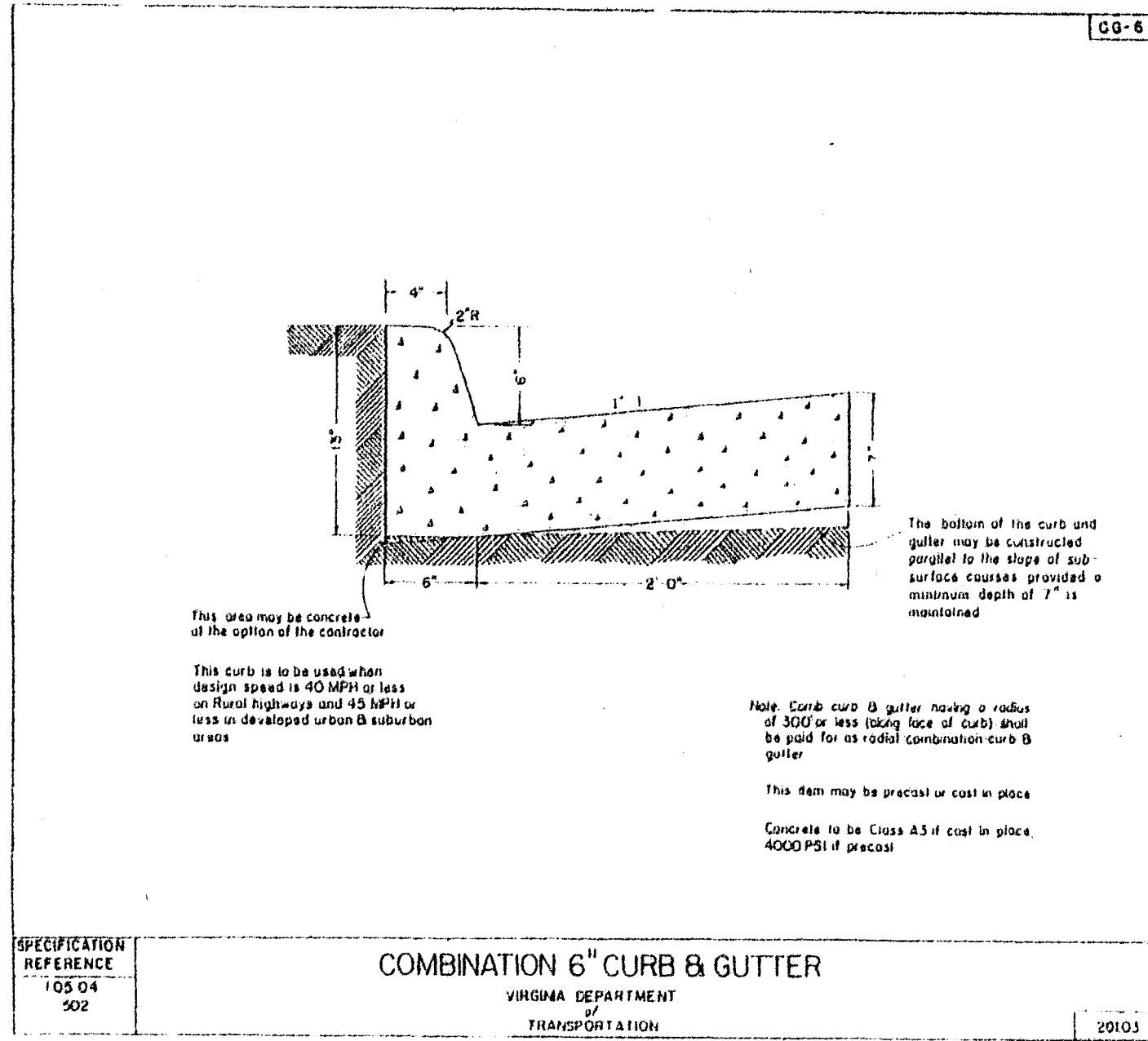
**GRADING, DRAINAGE, AND  
EROSION & SEDIMENT CONTROL PLAN**

**TENNING BUSINESS CENTER**

OWNER/DEVELOPER: ROBERT F. RIPLEY & CATHERINE J. RIPLEY  
JAMES CITY COUNTY VIRGINIA

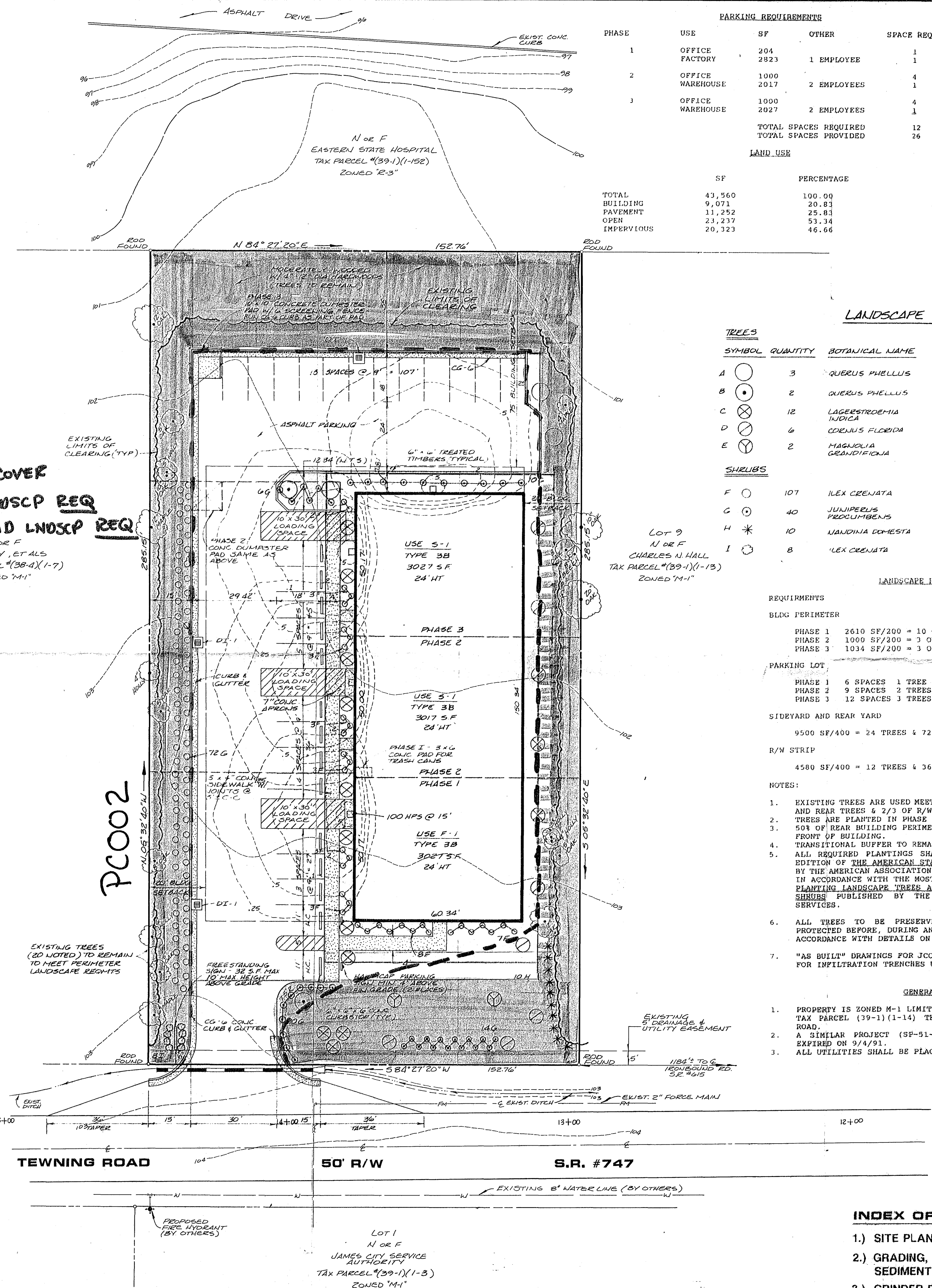
Designed RAC	Drawn RWE/CMA
Scale 1" = 20'	Date 5 / 28 / 90
Project No. <b>7459</b>	
Drawing No. <b>2 of 3</b>	



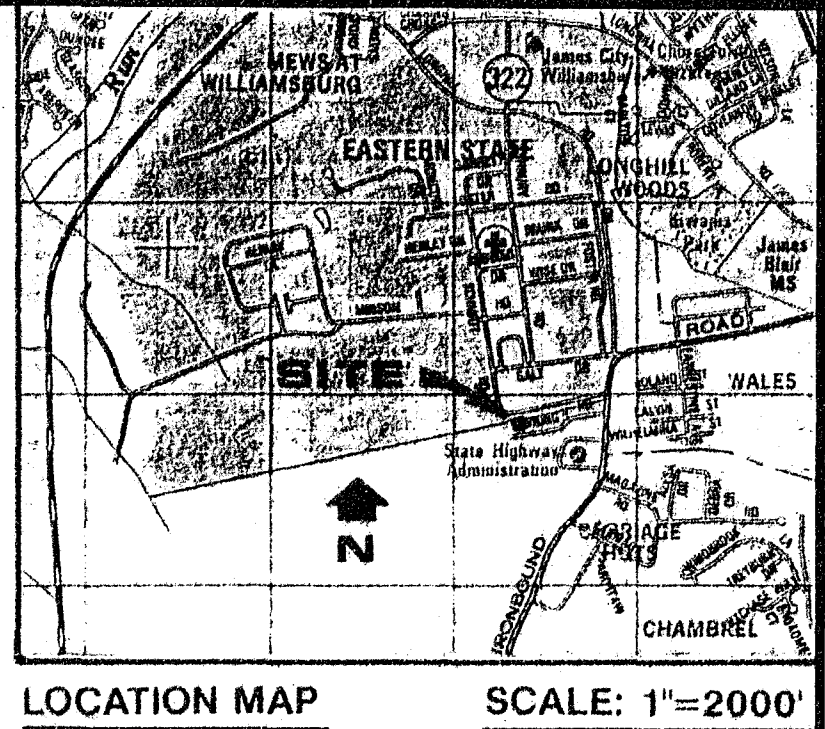


--- AREA BMP'S COVER  
 PERIMETER LANDSCAPE REQ  
 BLDG & ISLAND LANDSCAPE REQ

N OR F  
 CASEY, ET AL  
 TAX PARCEL # (39-1)(1-7)  
 ZONED "M-1"



PARKING REQUIREMENTS			
PHASE	USE	SF	SPACE REQ.
1	OFFICE	204	1
	FACTORY	2823	1
2	OFFICE	1000	4
	WAREHOUSE	2017	1
3	OFFICE	1000	4
	WAREHOUSE	2027	1
		TOTAL SPACES REQUIRED	12
		TOTAL SPACES PROVIDED	26
LAND USE			
	SF	PERCENTAGE	
TOTAL BUILDING	43,560	100.00	
PAVEMENT	9,071	20.83	
OPEN	11,252	25.81	
IMPERVIOUS	23,237	53.34	
	20,323	46.66	



LANDSCAPE SCHEDULE						
SYMBOL	QUANTITY	BOTANICAL NAME	COMMON NAME	CAULP	HEIGHT	REMARKS
A	3	QUERUS PHELLUS	WILLOW OAK	1 1/2	8'	PARKING LOT
B	2	QUERUS PHELLUS	WILLOW OAK	2 1/2	8'	PARKING LOT
C	12	LAGERSTROEMIA INDICA	CREAPE MYRTLE	1 1/4	8'	BLDG & R/W
D	6	CORNIUS FLORIDA	DOGWOOD	1 1/4	8'	BLDG & R/W
E	2	MAGNOLIA GRANDIFLORA	SOUTHERN MAGNOLIA	1 1/4	8'	R/W
SHRUBS						
F	107	ILEX CRENATA	JAPANESE HOLLY		18"	
G	40	JUNIPERUS PROCEUMBENS	DWARF JUNIPER		18"	
H	10	LAURUS DOMESTICA	LAURUS		22"	
I	8	ILEX CRENATA	HELLER HOLLY		18"	

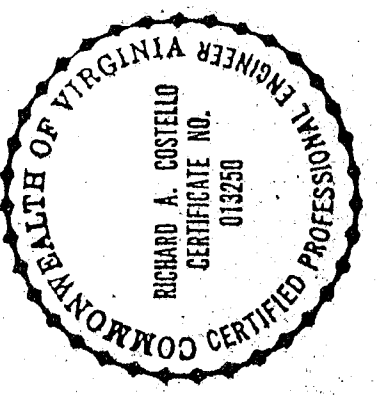
REQUIREMENTS	
BLDG PERIMETER	
PHASE 1	2610 SF/200 = 10 ORN & 25 SHRUBS
PHASE 2	1000 SF/200 = 3 ORN & 10 SHRUBS
PHASE 3	1034 SF/200 = 3 ORN & 10 SHRUBS
PARKING LOT	
PHASE 1	6 SPACES 1 TREE & 2 SHRUBS
PHASE 2	9 SPACES 2 TREES & 4 SHRUBS
PHASE 3	12 SPACES 3 TREES & 6 SHRUBS
SIDEYARD AND REAR YARD	
	9500 SF/400 = 24 TREES & 72 SHRUBS
R/W STRIP	
	4580 SF/400 = 12 TREES & 36 SHRUBS

- NOTES:
- EXISTING TREES ARE USED MEET THE REQUIREMENT FOR ALL SIDEYARD AND REAR TREES & 2/3 OF R/W STRIP TREES.
  - TREES ARE PLANTED IN PHASE SHOWN ON PLANS.
  - 50% OF REAR BUILDING PERIMETER STRIP HAS BEEN TRANSFERRED TO FRONT OF BUILDING.
  - TRANSITIONAL BUFFER TO REMAIN WOODED.
  - ALL REQUIRED PLANTINGS SHALL CONFORM WITH THE MOST RECENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERMEN AND SHALL BE PLANTED IN ACCORDANCE WITH THE MOST RECENT EDITION OF GUIDELINES FOR PLANTING LANDSCAPE TREES AND PLANTING AND CARE OF TREES AND SHRUBS PUBLISHED BY THE VIRGINIA COOPERATIVE EXTENSION SERVICES.
  - ALL TREES TO BE PRESERVED SHALL BE PRESERVED SHALL BE PROTECTED BEFORE, DURING AND AFTER THE DEVELOPMENT PROCESS IN ACCORDANCE WITH DETAILS ON THESE PLANS.
  - "AS BUILT" DRAWINGS FOR JCC CODE COMPLIANCE SHALL BE PROVIDED FOR INFILTRATION TRENCHES UPON COMPLETION.

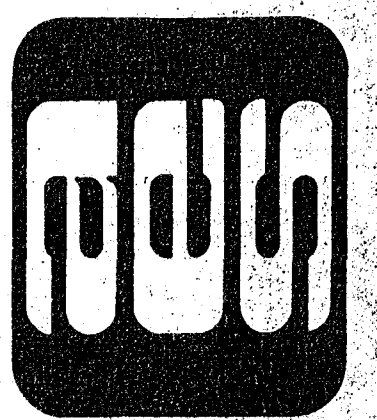
- GENERAL NOTES
- PROPERTY IS ZONED M-1 LIMITED INDUSTRIAL AND IS IDENTIFIED AS TAX PARCEL (39-1)(1-14) THE STREET ADDRESS IS 140 TEWNING ROAD.
  - A SIMILAR PROJECT (SP-51-90) WAS APPROVED ON 9/5/90 AND EXPIRED ON 9/4/91.
  - ALL UTILITIES SHALL BE PLACED UNDERGROUND.

INDEX OF SHEETS	
1.) SITE PLAN	
2.) GRADING, DRAINAGE & EROSION AND SEDIMENT CONTROL PLAN	
3.) GRINDER PUMP DETAILS	

NO.	DATE	REVISION / COMMENT / NOTE
1	7/27/91	REVISED PER JCC 7/23 LETTER
2		
3		
4		
5		
6		
7		
8		
9		
10		



AES, a professional corporation  
 5248 Old Towne Road, Suite 1  
 Williamsburg, Virginia 23185  
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 Engineering, Planning, Surveying



SITE PLAN  
 TEWNING BUSINESS CENTER  
 OWNER/DEVELOPER: ROBERT F. RIPLEY & CATHERINE J. RIPLEY  
 JAMES CITY COUNTY, VIRGINIA

Designed RAC	Drawn RWE/CMA
Scale 1" = 20'	Date 5/28/90
Project No. 7459	Drawing No. 1 of 3

**TABLE 3**  
**WORKSHEET FOR BMP POINT SYSTEM**

**A. STRUCTURAL BMP POINT ALLOCATION**

<u>BMP</u>	<u>BMP Points</u>	<u>Fraction of Site Served by BMP</u>	<u>Weighted BMP Points</u>
INFILT. (9)	10	x 57.5	= 5.75
WATER QUAL (11)	2	x 57.5	= 1.15
		x	=
		x	=
<b>TOTAL WEIGHTED STRUCTURAL BMP POINTS:</b>			<u>6.90</u>

**B. NATURAL OPEN SPACE CREDIT** (REQUIRED LANDSCAPED AREA) PINK ONLY

<u>Fraction of Site</u>	<u>Natural Open Space Credit</u>	<u>Points for Natural Open Space</u>
36.85	x 0.1 (0.1 per 1%)	= 3.68

**C. TOTAL WEIGHTED POINTS**

<u>6.9</u>	+	<u>3.7</u>	=	<u>10.6</u>
<b>Structural BMP Points</b>		<b>Natural Open Space Points</b>		<b>TOTAL</b>

Need min of 31% of site in Nat. Open space.

25 x 155 = 8.6% of site

35 x 150 = 2.1%

57.5%

6.9  
3.68  
10.6

P(002

CORPORATE MANAGEMENT CENTER  
(TENNING BUSINESS CENTER)

7-37  
8/29/90

PREDEVELOPMENT  $T_C = 20 \text{ MIN}$   $I = 2 \text{ YR}$

$$Q = .3(3.4)(1.0) = 1.02 \text{ CFS}$$

POST DEVELOPMENT @ REAR

$$2700 + 5936 @ .9 + 7700 \text{ SF} @ .2 = 16336 @ .57$$

$$T_C = 10 \text{ MIN}$$

$$\text{REAR } Q = .57(4.6)(.375) = .98 \text{ CFS}$$

POST DEVELOPMENT @ FRONT

$$20,200 @ .9 + 7000 @ .2 = 27,200 @ .72$$

$$Q_2 = .72(4.6)(.625) = 2.07 \text{ CFS TO ROADSIDE DITCH}$$

$$Q_{10} = .72(6.0)(.625) = 2.70 \text{ CFS}$$

THE ROADSIDE DITCH CURRENTLY CARRIES 5.36 CFS @ 15"± DEPTH. THE DITCH @ 18" DEPTH CAN CARRY 9 CFS  
FLOWS ARE  $5.36 + 2.70 = 8.06$  SO CURRENT  
DITCH IS OK. THIS WOULD BACK WATER  
UP INTO THE PARKING LOT AND THE  
LOT WOULD FUNCTION AS A PARTIAL  
DETENTION BASIN



# CALC FLOW

TURNING ROAD 4632

STATION	D.A.	SLOPES	IR = 4.0 m/100	Q2	V2	IR = 5.1 m/100	L/1000	Q10	C10.50	REMARKS
(K)		(FT/FT)	(CFS)	(CFS)	(CFS)	TRIP	(CFS)	(in)		

0725 - 14175 (L)	1.03	0.005	2.06	1.50	4.4455	2.63	11.2	4.4455	V-DITCH 4/21/55	18" DRAIN
0725 - 14175 (R)	1.24	0.005	2.46	1.60	4.4455	3.16	12.2			"
14175 - 18112 (L)	0.89	0.015	3.84	2.10	4.4455	4.90	13.5			"
TOTAL	1.92									
14175 - 19150 (L)	0.86	0.015	4.20	2.25	4.4455	5.36	15.0			"
TOTAL	2.10									

DISPERSED  
SHOULD BE 18"